

Sec. 2-1

Describe a heliocentric solar system. Who came up with this?

A solar system w/ the sun at the center. Thought up by Copernicus.

Describe a geocentric solar system and label it. Who came up with this?

A solar system with the earth at the center. Thought up by the Greeks and later Ptolomy.

Name the astronomer who proved a heliocentric solar system existed (using math).

Kepler

Name the two things Galileo saw that proved to him planets traveled in orbits around the sun.

Venus had phases like our moon AND Jupiter has 4 moons revolving around it

What two forces keep the planets in orbit?

Gravity and Inertia

What shape is a planetary orbit?

Ellipse

Explain what would happen if one of the forces keeping our planet in orbit would stop all of a sudden.

If gravity disappeared inertia would take over the planet would fly off into space in a straight line. If inertia disappeared, the sun's gravity would pull the planet into the sun.

2-2

Describe the core, photosphere, chromosphere, and corona of the sun.

Core- center of the sun

Chromosphere- middle layer that gives off a reddish glow

Photosphere- inner layer that gives off light

Corona- outer layer

What temperature (in Celsius) does the core of the sun reach?

15 million degrees C

What layer of the sun gives off visible light?

Photosphere

Solar wind results in _____ in the earth's atmosphere. auroras

When is the corona visible?

During a total solar eclipse

Describe a sunspot.

A dark area of the sun that is cooler than the areas around it

Explain the difference between a prominence and a solar flare.

A prominence is a loop of gas linking one sunspot to another; a solar flare is an explosion within one sunspot

2-3

Name the 4 inner planets (in order, spelled correctly).

Mercury, Venus, Earth, Mars

What term describes these four planets?

terrestrial

Which two inner planets have atmospheres made up of mostly carbon dioxide?

Mars and Venus

What is unique about Mercury's temperature?

It has the greatest temperature swing from day to night of any planet in the solar system

Which inner planets have moons? How many moons do they have?

Earth- 1; Mars- 2

Name two unique characteristics of Venus's rotation.

It's retrograde (rotates backwards from all other planets) and it rotates so slowly that a day is longer than a year

What causes Mars to have a red appearance?

Iron oxide (rust) on the surface

What two spacecraft are currently on Mars?

Spirit, Opportunity, Curiosity

2-4

Name the outer planets in order and spelled correctly.

Jupiter, Saturn, Uranus, Neptune

What two gases make up the atmospheres of most of the outer planets?

Hydrogen and Helium

Name the moon of Jupiter covered in ice.

Europa

What space probe(s) have taken photographs of most of the outer planets?

Voyager 1 and 2

What are Saturn's rings made of?

Chunks of ice and rock

What gas gives some planets a bluish color? What planets?

Methane; Uranus and Neptune

Name the largest moon of Saturn.

Titan

Which planet was discovered before it was ever visually observed?

Neptune

What is Pluto's moon named?

Charon

2-5

Draw a diagram showing the locations of a meteoroid, meteor, and a meteorite.

SEE YOUR NOTES

What's the difference between a meteoroid and an asteroid?

Size. An asteroid is much larger than a meteoroid

Describe what a comet looks like and why/when it has a tail.

Bright head made of nucleus (inner) and coma (outer) with a long tail; tail occurs only when it is close to the sun and tail is pushed back by solar winds

What important comet will visit us again in 2062?

Halley's Comet

Where do most asteroids stay in our solar system? (name and location)

Asteroid Belt between Mars and Jupiter

Where's the Chicxulub crater located?

Yucatan Peninsula, Mexico

Why do meteors burn in our atmosphere?

Friction creates heat as the object flies through the atmosphere

What materials (specifically) are meteorites usually made of?

Iron and Nickel

2-6

What are the Goldilocks Conditions? Name them.

1) Suitable Temperature 2) Suitable atmosphere 3) LIQUID water

What two locations are scientists interested in studying to look for life in our solar system?

Mars and Europa

If we found a single cell on another planet this would be an example of extraterrestrial life.

What have scientists found on Mars to show there was once liquid water on its surface?

They have found evidence of erosion and dried stream beds

How has the idea of life on Earth changed in the last few hundred years?

Life has been found in areas previously thought to be too harsh for life to exist. Some forms of life on Earth defy the Goldilocks Conditions